IN THE CLAIMS

Please cancel claims 15, 21, 25- 29, 30, 35-46, 48, 49, 51, 52, 53, 59, and 60. Accordingly, claims 1-14, 16-20, 22-24, 31-34, 47, 50, are 54-58 are pending upon entry of this Preliminary Amendment. The purpose of this amendment is to economize on USPTO fees.

Claim 1 (original) A protein-based composition for preventing or treating infection by a pathogen, comprising a compound that comprises:

at least one therapeutic domain comprising a peptide or protein, wherein said at least one therapeutic domain has at least one extracellular activity that can prevent the infection of a target cell by a pathogen; and

at least one anchoring domain comprising a peptide or protein, wherein said anchoring domain can bind at or near the surface of a eukaryotic cell.

Claim 2 (original) The composition of claim 1, wherein said anchoring domain can bind at or near the surface of an epithelial or endothelial cell.

Claim 3 (original) The composition of claim 2, wherein said anchoring domain can bind at or near the surface of an epithelial cell.

Claim 4 (original) The composition of claim 3, wherein said anchoring domain binds an epithelial cell surface molecule.

Claim 5 (original) The composition of claim 4, wherein said epithelial cell surface molecule is a glycosaminoglycan.

Claim 6 (original) The composition of claim 5, wherein said anchoring domain can bind heparin or heparan sulfate.

Claim 7 (original) The composition of claim 6, wherein said anchoring domain is a peptide.

Claim 8 (original) The composition of claim 7, wherein said peptide comprises a GAG-binding amino acid sequence of a naturally-occurring protein, or a sequence that is substantially homologous to the GAG-binding sequence of a naturally-occurring protein.

Claim 9 (original) The composition of claim 8, wherein said peptide comprises the GAG-binding amino acid sequence of a mammalian protein.

Claim 10 (original) The composition of claim 9, wherein said peptide comprises the GAG-binding amino acid sequence of a human protein.

Claim 11 (original) The composition of claim 10, wherein said peptide comprises an amino acid sequence substantially homologous to the amino acid sequence of **SEQ ID NO:2**, **SEQ ID NO:3**, **SEQ ID NO:4**, **SEQ ID NO:5**, **SEQ ID NO:6**, or **SEQ ID NO:7.**

Claim 12 (original) The composition of claim 11, wherein said comprises the GAG-binding amino acid sequence of human platelet factor 4 (**SEQ ID NO:2**), human interleukin 8 (**SEQ ID NO:3**), human antithrombin III (**SEQ ID NO:4**), human apoprotein E (**SEQ ID NO:5**), human angio-associated migratory protein (**SEQ ID NO:6**), or human amphiregulin (**SEQ ID NO:7**).

Claim 13 (original) The composition of claim 1, wherein said pathogen is a virus.

Claim 14 (original) The composition of claim 13, wherein said virus is an influenza virus.

Claim 15 (canceled)

Claim 16 (original) The composition of claim 13, wherein said at least one therapeutic domain comprises a protease inhibitor.

Claim 17 (original) The composition of claim 16, wherein said protease inhibitor inhibits an enzyme involved in processing a viral protein.

Claim 18 (original) The composition of claim 17, wherein said enzyme involved in processing a viral protein is a host enzyme.

Claim 19 (original) The composition of claim 18, wherein said protease inhibitor is a serine protease inhibitor.

Claim 20 (original) The composition of claim 19, wherein said protease inhibitor is aprotinin, leupeptin, soybean protease inhibitor, e-aminocaproic acid, or n-p-tosyl-L-lysine.

Claim 21 (canceled)

Claim 22 (original) The composition of claim 1, wherein said therapeutic domain is an enzyme or an active portion thereof.

Claim 23 (original) The composition of claim 22, wherein said therapeutic domain is a sialidase.

Claim 24 (original) The composition of claim 20, wherein said sialidase is substantially homologous to at least a portion of at least one viral sialidase, at least one bacterial sialidase, or at least one eukaryotic sialidase.

Claims 25-30 (canceled)

Claim 31 (original) The composition of claim 24, wherein said sialidase is substantially homologous to at least a portion of at least one eukaryotic sialidase.

Claim 32 (original) The composition of claim 31, wherein said sialidase is substantially homologous to at least a portion of at least one human sialidase.

Claim 33 (original) The composition of claim 32, wherein said sialidase is substantially homologous to at least a portion of NEU1, NEU3, NEU2, or NEU4.

Claim 34 (original) The composition of claim 33, wherein said sialidase is substantially homologous to at least a portion of NEU2 (**SEQ ID NO:8**), or NEU4 (**SEQ ID NO:9**).

Claims 35-46 (canceled)

47. A pharmaceutical formulation comprising the composition of claim 1.

Claims 48 (canceled)

Claim 49 (canceled)

Claim 50 (original) A method of treating or preventing influenza infection, comprising:
applying a therapeutically effective amount of the composition of claim 1 to epithelial cells of a subject.

Claims 51-53 (canceled)

Claim 54 (original) A method of using a sialidase to prevent or impede infection by a pathogen, comprising:

providing a composition that comprises at least one sialidase;
applying a therapeutically effective amount of said composition
to epithelial cells of a subject.

Claim 55 (original) The method of claim 54, wherein said sialidase is substantially homologous to at least a portion of at least one viral sialidase, at least one bacterial sialidase, or at least one eukaryotic sialidase.

Claim 56 (original) The composition of claim 55, wherein said sialidase is substantially homologous to at least a portion of at least one eukaryotic sialidase.

Claim 57 (original) The composition of claim 56, wherein said subject is a human subject, and said sialidase is substantially homologous to at least a portion of at least one human sialidase.

Claim 58 (original) The composition of claim 57, wherein said sialidase is substantially homologous to at least a portion of NEU2 (**SEQ ID NO:8**), or NEU4 (**SEQ ID NO:9**).

Claim 59 (canceled)

Claim 60 (canceled)